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No. 1

13

LIVERPOOL SCHOOL
OF TROPICAL
MEDICINE □ □



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Bulletin of the Liverpool School of Tropical Medicine

Malaria and Mosquito-Reduction

1. Letters from Prince d'Arenberg to Professor Ross and Sir George Clarke, on the Prevention of Malaria at Ismailia
2. Letter from Dr. H. Overton Hobson to Dr. H. C. Ross on the Reduction of Mosquitoes at Helouan, Egypt

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NOTE

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SCHOOL OF TROPICAL MEDICINE

1. Letter from Prince Auguste d'Arenberg, President of the Suez Canal Company, to Major R. Ross, C.B., F.R.S., Professor of Tropical Medicine, covering one to His Excellency Sir George Sydenham Clarke, R.E., G.C.M.G., G.C.I.E., F.R.S., Governor of Bombay

(TRANSLATION)

SUEZ CANAL COMPANY,
9, RUE CHARRAS,
PARIS, 22nd May, 1900

DEAR MAJOR ROSS,

Referring to my letter of the 31st of March last, I have pleasure in sending you, annexed, copies of the letter and enclosures which I am sending to the Governor of Bombay in response to the request which he has made to me direct, and through your goodself, with regard to the suppression of malaria at Ismailia.

I think my communication contains all the data that you desired it to contain, and that it categorically answers the criticisms formulated by your adversaries at the Bombay Congress.

I am happy—I take pleasure in repeating to have had the opportunity offered me again to acknowledge the great services that you have rendered to us in the anti-malarial struggle that we have undertaken at our administrative centre on the Isthmus of Suez.

Believe me, dear Major Ross,

Very sincerely yours,

PRINCE AUGUSTE D'ARENBERG,
President of the Company.

TO MAJOR RONALD ROSS, F.R.C.S., F.R.S., C.B.,
Liverpool.

Published by permission of Sir George Clarke

(TRANSLATION)

PARIS, 22nd May, 1909

SIR,

I regret not to have replied any sooner to the letter which you have kindly addressed to me on the subject of the suppression of malaria at Ismailia, but the various documents and information that I had asked for from Egypt, in order to enlighten you, have only just come to hand. I am, indeed, desirous that my reply should contain as distinct a refutation as possible of the entirely false assertions made at the Bombay Medical Congress with regard to the success that has attended our Company in applying the methods of Major Ross.

On the occasion of the Colonial Exhibition held at Marseilles in 1906, we published a 'Note on the Suppression of Malaria at Ismailia.' I send you herewith a copy of the document, which will inform you, in a general way, concerning the work that we have undertaken since the commencement of the campaign in 1902; and I add to it some tables which carry the information contained in that note up to the present time. I desire, moreover, to draw special attention to certain particularly interesting points.

You will observe, in the first place, that Ismailia was infested with malaria until 1902. The town was at that time so overrun with mosquitoes—*Anopheles* or others—that it was impossible at any time to get any rest, either by day or night, without the protection of a mosquito-net; whereas, ever since the following year (1903) this system of defence has completely ceased to be used. Previously, newcomers to Ismailia were, almost all without exception, very rapidly attacked with malaria. Now, from 1903 to 1908, about fifty agents, several of them accompanied by their families, arriving

from Europe, have resided at our administrative centre, and none of them, nor any of the members of their families, have contracted the disease.

Hand-in-hand with the general work of sanitation (filling up the swamps, cleaning the drains, etc.), the disinfection of the privy pits and the searching for the lodgments of the larvae of the mosquitoes, the physicians of the Company have prescribed a curative treatment for the old confirmed malarians, and general prophylactic and preventive measures for rendering immune the persons not affected.*

These arrangements all working together have had the most happy effect. From time to time, the winds bring a good number of *Anopheles*; on the other hand, some insects get through into the town, conveyed either by the railway trains or by the craft trading on the canals, but their presence, which never is of great duration, no longer occasions an epidemic.

At the request of Major Ross, the Physician in charge of our Hospital establishment at Ismailia has, last month, both at the Dispensary which we maintain in that town and at the Hospital, examined the state of the spleen and of the liver of a large number of children or of sick persons. It is shewn by the documents annexed (Nos. 1 and 2), where these observations are summed up, that out of 348 persons, only two had a morbidly enlarged liver or spleen. This verified fact shews in a decisive manner the excellence of the general sanitary state, from the malaria point of view. Another Table (No. 3) shews the absolutely insignificant number of the cases of malaria observed at the Saint Vincent Hospital since 1905 amongst the inhabitants of Ismailia, and the explanations of the Physician-in-Charge shew that they were only cases of relapse.

Lastly, I beg to point out to you that the cost of our anti-malarial campaign is commensurate with the result attained. The non-recurrent expenses, incurred for filling up the pools and drainage of the swamps and arable lands situate in the neighbourhood of the town, and to which the Egyptian Government has contributed a part, to-day reach a total of about a hundred thousand francs. The area of the improved lands represents about 400 hectares.

* When I was at Ismailia last February I was informed that though quinine is still issued as a formality or for the purposes of general medical treatment, few persons trouble to take it as a prophylactic against malaria. *R. Ross.*

The permanent expenses for disinfection, the hunt for mosquitoes and larvae, and the maintenance of the improved lands, have remained at about 18,000 francs per annum since 1903.

In that year, 1903, the Company had paid, both in wages to their workmen sick with the fever and in curative medicines given out to old malaria patients, and for general prophylactic measures, a sum of 38,200 francs; the whole of these charges amounted to only 20,000 francs in 1904; for 1908, this total has dropped to 16,800 francs (No. 4). A Table (No. 5) shews that the amount of the sales of quinine by the International Pharmacy of Ismailia has decreased by two-thirds from 1902 to 1908.*

We have therefore succeeded, without excessive expenditure, in causing the rapid disappearance of a terrible scourge by means of a set of measures that can easily be carried out in any country; and I draw your special attention to the fact that not only has cultivation not been restricted, but, thanks to the filling up and to the drainages, it has been possible to cultivate the marshy land, formerly useless, and same to-day giving a good return. I am, personally, convinced that the same result may be obtained elsewhere, provided there is brought into the application of the measures recommended by Major Ross that care, that method, and that spirit of continued attention, which are the fundamental basis of a success which the slightest negligence may call in question.

I beg to add that I should be very glad if a Commission, consisting of specialists whom you would appoint, would come to Ismailia at the most unfavourable period, when the full effect of the measures employed by the Company manifests itself most clearly, that is to say, in September or in October.

That Commission—guided by our officials and our physicians—will be able to verify the good sanitary condition of the population, and will easily find out on the spot how ridiculous is the assertion made at Bombay that the Company were concealing the truth concerning the sanitary state of Ismailia in order to attract visitors to the place!

* I am informed that a considerable part of these expenses have been, and are, incurred, not only for malaria prevention, but also for agricultural and other purposes—see next paragraph. *R. Ross.*

We should be very pleased if the countries infested by malaria could profit by the definite results that we have obtained, and on that account I take the liberty of pressing for the sending of the Commission just alluded to, which would receive the warmest welcome in our small town.

I have the honour to remain, Sir,

Your obedient Servant,

Signed : PRINCE AUGUSTE D'ARENBERG,
President of the Company.

TO SIR G. S. CLARKE, G.C.I.E., G.C.M.G.,
Governor of the Province of Bombay.

(ENCLOSURES TRANSLATION)

No. 1.

ISMAILIA

EXAMINATIONS MADE IN THE TOWN AND AT THE
DISPENSARY, OF CHILDREN UNDER 15 YEARS OF AGE,
DURING THE MONTH OF APRIL, 1909

Dates	NATIVES, SEX		EUROPEANS, SEX		Total Number of Exami- nations	SPLEEN AND LIVER	
	Males	Females	Males	Females		Normal	Hyper- trophied
April 2 ...	13	7	1	2	23	23	0
" 3 ...	18	12	2	2	34	34	0
" 5 ...	19	14	2	7	42	42	0
" 6 ...	9	15	1	4	29	29	0
" 7 ...	4	11	7	1	23	23	0
" 9 ...	4	9	2	3	18	18	0
" 10 ...	3	—	—	—	3	3	0
" 13 ...	12	8	2	2	24	24	0
" 14 ...	9	8	—	—	17	16	1
" 16 ...	4	7	—	—	11	11	0
" 17 ...	5	12	—	—	17	17	0
" 19 ...	4	8	—	—	12	12	0
" 23 ...	2	1	1	—	4	4	0
" 24 ...	2	3	—	—	5	5	0
" 27 ...	10	5	2	1	18	18	0
	118	120	20	22	280	279	1

The examinations have been carried out in the upright position, the upper part of the body inclined slightly forward. In doubtful cases the palpation has been completed by percussion in the horizontal position.

The only child whose liver was hypertrophied was a native, three years old, who, moreover, was slightly dropsical. The spleen was normal. The parents did not remember having seen it in a fever.

Signed: DR. CAMBOULIU.

No. 2.

EXAMINATION OF THE PATIENTS PRESENT AT THE
HOSPITAL OF ST. VINCENT DE PAUL AT ISMAILIA

Dates	NATIVES		EUROPEANS		Total Number of Exami- nations	SPLEEN AND LIVER	
	Children	Adults	Children	Adults		Normal	Hyper- trophied
1909							
April 6 ...	5	20	3	20	48	48	0
.. 27 ...	4	5	3	8	20	19	1
	9	25	6	28	68	67	1

The patients examined were suffering from various medical and surgical complaints.

The single case of hypertrophied spleen is a native child, 1½ years of age, born at Cairo, and a resident of Ismailia only during the last three months. The spleen is plainly increased in volume, and may very well be considered as a malarial spleen. The examination of the blood has been negative from the haematozoal point of view.

Signed: DR. CAMBOULIU.

No. 3.

HOSPITAL OF ST. VINCENT DE PAUL AT ISMAILIA

*Statement of the cases of Malaria or of Fevers the diagnosis of which
may lead one to think of Malaria, during the last four years.*

NAME AND SURNAME	1905	
	DIAGNOSIS	PLACE OF ORIGIN
Wroblewski, Joseph	Intermittent Fever (Relapse)	Ismailia
Hermann Barndt	Malaria	Néfiche
Nelly Tünge	Malaria	Néfiche
Emilie Tünge	Malaria	Néfiche
Mikali Kalergis	Fever	Kilometre 130
Ant. Torchia (female)	Continuous fever	Kilometre 64
Abouèche Ibrah (female)	Dengue fever	Ismailia
Abouèche Ibrah (4 children)	Dengue fever	Ismailia

1906

Garboui Hassan	Malaria (relapse)	Ismailia
Nicolandi Yanaga	Malaria	Ismailia
Mina Pipperi	Infectious fever	Port Said
Harima Mohassen	Malaria	Ismailia

1907

Rodiadis Nicolas	Continuous fever	Toussoum (usual residence Port Said)
Ahmed Y. Derwich	Continuous fever	Port Said
Mikaliziano (female)	Continuous fever	Ismailia
Kuczewski (female)	Intermittent fever	Suez

1908 *

Abdul Hassan Imhamel	Malaria	Suez
Hadji Hassen (boy of 10)	Continuous fever	Suez
Kheir Allah Mograbi (female)	Continuous fever	Ismailia
Hamixianos Elia (female)	Fever	Port Said
Hamixianos Elia (4 children)	Fever	Port Said
Falco Costanzo (girl of 5)	Continuous fever	Port Said
Poulara Manoli (boy of 6)	Continuous fever	Port Said
Aristea Nicolakis	Intermittent fever	Ismailia
Ali Omar (boy of 5)	Fever	Suez
Pussich Ant. (male, 23)	Intermittent fever	Suez
Nenna Nicolas (male, 15)	Intermittent fever	Kantara
Salein Hassan (boy of 11)	Chronic Malaria	Suez

After eliminating the patients originating from Port Said, Suez, Canal Stations, and Néfiche, which are outside our improvement zone, there remain a very small number of cases for us to examine:—

1905. The only Ismailia patient taken in for Intermittent Fever was an old malaria patient, who, when he got too much drink from time to time, had attacks of fever.

1906. We have to note three cases of malaria in the case of people who had attacks already during the preceding years.

1907. One single female affected with Continuous Fever (synonymous with Typhoid Fever).

1908. Still a case of Continuous Fever, that is to say, Dothien-enteric.

Here a case of Intermittent Fever finds a place; it was the domestic servant of a pilot, who had arrived from the Grecian Islands, where she had already had malaria.*

To recapitulate, one may say that in four years we have not had to attend at the St. Vincent Hospital a single case of malaria of the first invasion distinctly contracted at Ismailia. During that long period the number of patients has been 3,424.

* Malaria, intermittent fever, and paludism, are different names for the same thing.
W. Ross.

No. 4.

ISMAILIA

WAGES PAID TO FEVER PATIENTS WHILST NOT WORKING.
 CURATIVE MEDICINES DISTRIBUTED TO OLD MALARIA
 PATIENTS. GENERAL PROPHYLACTIC MEASURES.

TOTAL OF EXPENSES :

1903.....	38,209 francs.
1904.....	25,986 „
1905.....	17,420 „
1906.....	16,963 „
1907.....	15,642 „
1908.....	16,806 „

No. 5.

INTERNATIONAL CO-OPERATIVE PHARMACY AT ISMAILIA

SALE OF QUININE :

1902.....	10,905 fr. 10
1903.....	15,678 fr. 20
1904.....	11,624 fr. 17
1905.....	6,482 fr. 40
1906.....	6,689 fr. 90
1907.....	8,821 fr. 96
1908.....	5,927 fr. 44

(ORIGINAL)

COMPAGNIE UNIVERSELLE DU
CANAL MARITIME DE SUEZ,
9, RUE CHARRAS,
PARIS, *le 22 Mai, 1909*

MONSIEUR LE MAJOR,

Comme suite à ma lettre du 31 Mars écoulé, j'ai le plaisir de vous remettre, sous ce pli, copies de la lettre et de ses annexes que j'adresse au Gouverneur de Bombay pour répondre à la demande qu'il m'a faite directement et par votre entremise au sujet de la suppression du paludisme à Ismailia.

Je pense que ma communication contient tous les éléments que vous désiriez y voir figurer, et qu'elle répond catégoriquement aux critiques formulées par vos adversaires au Congrès de Bombay.

Je suis heureux, je me plais à le répéter, de l'occasion qui m'est offerte de reconnaître de nouveau les grands services que vous nous avez rendus dans la lutte anti-malarique que nous avons entreprise dans notre centre administratif de l'Isthme de Suez.

Veuillez agréer, Monsieur le Major, l'assurance de ma considération la plus distinguée.

Le Président de la Compagnie,

PRINCE AUGUSTE D'ARENBERG.

MAJOR RONALD ROSS, F.R.C.S., F.R.S., C.B.,
à Liverpool.

(ORIGINAL)

PARIS, *le 22 Mai, 1909*

MONSIEUR LE GOUVERNEUR,

Je regrette de ne pas avoir répondu plus tôt à la lettre que vous avez bien voulu m'adresser au sujet de la suppression du Paludisme à Ismaïlia, mais les divers documents et renseignements que j'avais demandés en Egypte pour vous éclairer viennent seulement de me parvenir. Je désire, en effet, que ma réponse contienne une réfutation aussi nette que possible des assertions entièrement erronées émises au Congrès Médical de Bombay sur le succès remporté par notre Compagnie en appliquant les méthodes du Major Ross.

A l'occasion de l'Exposition Coloniale qui s'est tenue à Marseille en 1906, nous avons publié une 'Note sur la suppression du Paludisme à Ismaïlia.' Je vous remets ci-inclus un exemplaire de ce document, qui vous fera connaître d'une manière générale les travaux que nous avons entrepris dès le début de la campagne en 1902, et j'y joins quelques tableaux qui complètent, jusqu'à ce jour, les renseignements contenus dans cette note. Je tiens, en outre, à préciser certains points particulièrement intéressants.

Vous remarquerez tout d'abord qu'Ismaïlia était infestée de paludisme jusqu'en 1902; la ville était alors tellement envahie par les moustiques — anophèles ou autres — qu'il était impossible, en toute saison, de reposer, que ce fût de jour ou de nuit, sans la protection de la moustiquaire, tandis que dès l'année suivante (1903) ce système de défense a totalement cessé d'être employé. Antérieurement, les nouveaux venus à Ismaïlia étaient, presque tous sans exception, atteints très rapidement par la fièvre paludéenne. Or, de 1903 à 1908, une cinquantaine d'agents, dont plusieurs accompagnés de leur famille, arrivant d'Europe, ont résidé dans notre centre administratif et aucun d'eux ni aucun des membres de leur famille n'a contracté la malaria.

Concurremment aux travaux généraux d'assainissement (comblement des marais, nettoyage des rigoles, etc.), au pétrolage des fosses d'aisance, à la recherche des gîtes des larves des moustiques, les médecins de la Compagnie ont prescrit un traitement curatif aux anciens paludéens avérés et des mesures prophylactiques générales préventives pour immuniser les personnes non atteintes.

L'ensemble de ces dispositions a eu le plus heureux effet. De temps à autre, les vents apportent bien des anophèles, d'autre part quelques insectes pénètrent dans la ville, véhiculés soit par les trains de chemin de fer, soit par les barques qui sillonnent les canaux, mais leur présence, qui n'est jamais de longue durée, n'engendre plus d'épidémie.

A la demande du Major Ross, le Médecin-Directeur de notre Etablissement hospitalier d'Ismailia a examiné, le mois dernier, tant au Dispensaire que nous entretenons dans cette ville, qu'à l'Hôpital, l'état de la rate et du foie d'un grand nombre d'enfants ou de malades. Il résulte des documents ci-joints (Nos. 1 et 2), où se trouvent résumées ces observations, que sur 348 personnes, 2 seulement avaient le foie ou la rate hypertrophié. Cette constatation démontre d'une manière péremptoire l'excellence de l'état sanitaire général au point de vue du paludisme. Un autre tableau (No. 3) montre le nombre absolument insignifiant des cas de fièvre paludéenne reconnus à l'Hôpital Saint-Vincent depuis 1905 parmi les habitants d'Ismailia, et les explications du Médecin-Directeur établissent qu'il s'agit seulement de récidives.

Je vous signale enfin que les dépenses de notre campagne anti-malarique sont en rapport avec l'importance du résultat atteint. Les dépenses une fois faites pour comblement des mares et drainages des marais et cultures situés aux environs de la ville, dans lesquelles le Gouvernement Egyptien a contribué pour partie, atteignent aujourd'hui un ensemble d'une centaine de mille francs. La surface des terrains assainis représente 400 hectares environ.

Les dépenses permanentes pour le pétrolage, la chasse aux moustiques et aux larves et l'entretien des terrains assainis restent aux environs de 18.000 francs par an depuis 1903.

En cette année 1903, la Compagnie avait payé, tant en salaires à ses ouvriers malades de la fièvre, qu'en médicaments curatifs délivrés aux anciens paludéens et en mesures prophylactiques

générales, une somme de 38.200 francs; l'ensemble de ces frais n'était plus que de 26.000 francs en 1904; pour 1908, ce total s'est abaissé à 16.800 francs (No. 4). Un tableau (No. 5) indique que le montant des ventes de quinine par la Pharmacie Internationale d'Ismailia a diminué des deux tiers de 1902 à 1908.

Nous avons donc réussi, sans dépenses exagérées, à faire disparaître rapidement un redoutable fléau avec un ensemble de mesures que l'on peut exécuter facilement en tous pays, et j'attire spécialement votre attention sur le fait que non seulement les cultures n'ont pas été restreintes, mais que, grâce aux comblements et aux drainages, des terrains marécageux autrefois inutilisables ont pu être cultivés et donnent aujourd'hui un bon rendement. J'ai personnellement la conviction que le même résultat peut être obtenu ailleurs, à condition d'apporter dans l'application des mesures préconisées par le Major Ross le soin, la méthode et l'esprit de suite qui sont la base fondamentale d'un succès que la moindre négligence peut compromettre.

J'ajoute qu'il me serait agréable qu'une commission, composée de spécialistes que vous désigneriez, voulût bien se rendre à Ismailia à l'époque la plus défavorable et où le plein effet des mesures appliquées par la Compagnie se manifeste avec le plus d'évidence, c'est-à-dire en Septembre ou en Octobre.

Cette Commission guidée par nos fonctionnaires et nos médecins—pourra constater le bon état sanitaire de la population et se rendre facilement compte sur place de ce qu'il y a de ridicule dans l'assertion émise à Bombay que la Compagnie dissimulerait la vérité sur l'état sanitaire d'Ismailia pour y attirer des visiteurs!

Nous serions très heureux que les pays infestés par la malaria puissent profiter des résultats définitifs que nous avons obtenus et c'est pourquoi je me permets d'insister auprès de vous pour l'envoi de la Commission à laquelle je viens de faire allusion, qui recevrait dans notre petite ville l'accueil le plus empressé.

Veillez agréer, Monsieur le Gouverneur, l'assurance de ma haute considération.

Le Président de la Compagnie,

Signé: PRINCE AUGUSTE D'ARENBERG.

SIR G. S. CLARKE, G.C.L.E., G.C.M.G.,

Gouverneur de la Province de Bombay.

No. 1

ISMAÏLIA

EXAMENS PRATIQUÉS EN VILLE ET AU
DISPENSARE SUR DES ENFANTS AU-DESSOUS DE 15 ANS
PENDANT LE MOIS D'AVRIL 1909

Dates	INDIGÈNES SEX		EUROPÉENS SEX		Total des Examens	RATE ET FOIE.	
	Masc	Fémin	Masc	Fémin		Normaux	Hyper- trophies
2 Avril ...	13	7	1	2	23	23	0
3 „ ...	18	12	2	2	34	34	0
5 „ ...	19	14	2	7	42	42	0
6 „ ...	9	15	1	4	29	29	0
7 „ ...	4	11	7	1	23	23	0
9 „ ...	4	9	2	3	18	18	0
10 „ ...	3	—	—	—	3	3	0
13 „ ...	12	8	2	2	24	24	0
14 „ ...	9	8	—	—	17	16	1
16 „ ...	4	7	—	—	11	11	0
17 „ ...	5	12	—	—	17	17	0
19 „ ...	4	8	—	—	12	12	0
23 „ ...	2	1	1	—	4	4	0
24 „ ...	2	3	—	—	5	5	0
27 „ ...	10	5	2	1	18	18	0
	118	120	20	22	280	279	1

Les examens ont été pratiqués dans la station debout, le buste légèrement incliné en avant. Dans les cas douteux, la palpation a été complétée par la percussion dans la position horizontale.

Le seul enfant dont le foie fût hypertrophié était un indigène âgé de 3 ans, qui avait, en outre, une légère ascite. La rate était normale. Les parents ne se rappelaient pas lui avoir vu de la fièvre.

Signé: DOCTEUR CAMBOULIU.

No. 2

EXAMEN DES MALADES PRÉSENTS
A L'HÔPITAL SAINT-VINCENT DE PAUL À ISMAÏLIA

Dates	INDIGENES		EUROPÉENS		Total des Examens	RATE ET FOIE	
	Enfants	Adultes	Enfants	Adultes		Normaux	Hyper- trophiés
1909							
6 Avril ...	5	20	3	20	48	48	0
27 „ ...	4	5	3	8	20	19	1
	9	25	6	28	68	67	1

Les malades qu'on a examinés avaient des affections variées médicales et chirurgicales.

Le seul cas de rate hypertrophiée est un enfant indigène, âgé d'un an 1/2, qui est né au Caire et n'habite Ismaïlia que depuis 3 mois. La rate est nettement augmentée de volume et peut très bien être considérée comme une rate paludique. L'examen du sang a été négatif au point de vue hématozoaire.

Signé: DOCTEUR CAMBOULIU.

No. 3

HÔPITAL SAINT-VINCENT DE PAUL À ISMAÏLIA

*Relevé des cas de Paludisme ou de Fièvres dont le diagnostic peut
faire penser au paludisme, pendant les 4 dernières années*

NOMS ET PRÉNOMS	ANNÉE 1905	
	DIAGNOSTIC	LIEU DE PROVENANCE
Wroblecki, Joseph	Fièvre intermittente (récidive)	Ismaïlia
Hermann Barndt	Paludisme	Néliche
Nelly Tünge	Malaria	Néliche
Emilie Tünge	Paludisme	Néliche
Mikali Kalergis	Fièvre	Kilomètre 130
Ant. Torchia (Femme)	Fièvre continue	Kilomètre 64
Abouèche Ibrah. (Femme)	Fièvre dengue	Ismaïlia
„ „ (4 Enf.)	Fièvre dengue	Ismaïlia

ANNÉE 1906

Garbaoui Hassan	Malaria (récidive)	Ismailia
Nicolandi Yanaga	Malaria	Ismailia
Mina Pipperi	Fièvre infectieuse	Port-Saïd
Harima Mohassen	Malaria	Ismailia

ANNÉE 1907

Rodiadis Nicolas	Fièvre continue	Toussoum (Résidence habituelle Port-Saïd)
Ahmed Y. Derwich	Fièvre continue	Port-Saïd
Mikaliziano (Femme)	Fièvre continue	Ismailia
Kuczewki (Femme)	Fièvre intermittents	Suez

ANNÉE 1908

Abdul Hassen Inhamel	Malaria	Suez
Hadji Hassan (Fils 10 ans)	Fièvre continue	Suez
Kheir Allah Mograbi (Femme)	Fièvre continue	Ismailia
Hamixianos Elia (Femme)	Fièvre	Port-Saïd
„ „ (4 enfants)	Fièvre	Port-Saïd
Falco Costanzo (Fille 5 ans)	Fièvre continue	Port-Saïd
Poulara Manoli (Fils 6 ans)	Fièvre continue	Port-Saïd
Aristea Nicolakis	Fièvre intermittente	Ismailia
Ali Omar (Fils 5 ans)	Fièvre	Suez
Pussich Ant. (Fils 23 ans)	Fièvre intermittente	Suez
Nenna Nicolas (Fils 15 ans)	Fièvre intermittente	Kantara
Salem Hassan (Fils 11 ans)	Paludisme chronique	Suez

Après avoir éliminé les malades provenant de Port-Saïd, de Suez, des Gares du Canal et de Néfiche qui sont en dehors de notre zone d'assainissement, il nous reste un tout petit nombre de cas à examiner :

Année 1905. Le seul malade d'Ismailia entré pour fièvre intermittente était un vieux paludéen qui à l'occasion d'excès de boisson avait de temps en temps des poussées de fièvre.

Année 1906.—A noter 3 cas de paludisme chez des gens qui avaient eu déjà des manifestations les années précédentes.

Année 1907.—Une seule femme atteinte de fièvre continue (synonyme de fièvre typhoïde).

Année 1908.—Encore une fièvre continue, c'est-à-dire une dothiéntérie

Ici se place un cas de fièvre intermittente, il s'agissait de la domestique d'un pilote, arrivée des îles grecques où elle avait déjà eu la malaria.

En somme, on peut dire que nous n'avons pas eu à soigner en 4 ans, à l'Hôpital Saint-Vincent, un seul cas de paludisme de première invasion manifestement contracté à Ismailia. Pendant cette longue période, le nombre de malades a été de 3,424.

No. 4

ISMAILIA

SALAIRES PAYÉS AUX FIÉVREUX PENDANT CHÔMAGE.
MÉDICAMENTS CURATIFS DISTRIBUÉS AUX ANCIENS
PALUDÉENS.

MESURES PROPHYLACTIQUES GÉNÉRALES.

Ensemble des dépenses :

1903.....	38,209 fr.
1904.....	25,986 „
1905.....	17,420 „
1906.....	10,903 „
1907.....	15,642 „
1908.....	10,800 „

No. 5

PHARMACIE INTERNATIONALE COOPÉRATIVE D' ISMAILIA

Vente de quinine :

1902.....	16,905 fr. 10
1903.....	15,048 fr. 20
1904.....	11,024 fr. 17
1905.....	6,482 fr. 40
1906.....	6,689 fr. 90
1907.....	8,821 fr. 96
1908.....	5,027 fr. 44

2. *Copy of letter from Dr. H. Overton Hobson, Egyptian Government Medical Director of the Baths and Springs, Helouan, Egypt, to Dr. H. C. Ross, dated June 7th, 1909.*

MY DEAR ROSS,

I was very pleased to hear from you. I saw your brother several times last winter, and made enquiries after you. With regard to your question. The campaign you initiated at Helouan has made the place absolutely different to what it used to be. During last winter I was the only one of a household of six Europeans who used a mosquito net at night, the reason for my using one being solely for the purpose of preventing a possible fly disturbing me. During entire winter, which was the warmest I have experienced there in nine years, I don't think any of my household ever saw a mosquito in the house, although my garden received a great amount of watering. This was not quite the case at the Grand, at Hayat, Bath Hotels, &c. Here I noticed a few, but I should say in a proportion of one to a thousand in former years. The authorities still send men weekly to *my* house to carry on your work, but whether since your departure the work is being done as thoroughly in other houses as when you were there to superintend it I cannot be quite certain. I should fancy not, because a few months of your work made such a marvellous difference that, to my mind, if that work had been continued in the same manner, mosquitoes should never have been found at these hotels at all by now. I can say that life at Helouan and life in Cairo may be compared as in the former one of peace, in the latter one of torment. I spent the last few nights of my stay in Egypt this spring at the Turf Club, and both there and other places, in the evenings I was persecuted with these pests.

Seeing what you were able to accomplish, I can only say if the Cairo residents realised what your methods had done for Helouan, they would never rest until their own town was similarly dealt with.

As a medical man, I look upon such work as just as valuable and important for the health of the public as the expensive drainage scheme they are now beginning to carry out in Cairo.

Many thanks for enquiries after my health, I am very fit again. In great haste.

Yours very sincerely,

(Signed) H. OVERTON HOBSON.

P.S. — Use this in any way you wish.